

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A data storage circuit characterized by providing a comparison section for reading out existing data stored in a storage element to compare said existing data and new data with each other prior to writing of said new data to said storage element, and configuring so that, in said comparison section, in a case where said existing data and said new data are identical with each other, the writing to said storage element is not performed, and in a case where said existing data and said new data are not identical with each other, said new data is written to said storage element; and

characterized by providing a control signal generating section for generating a readout control signal for performing readout control of said existing data and a write control signal for performing write control of said new data, and by configuring so that said existing data and said new data are compared with each other in said comparison section in accordance with said write control signal from said control signal generating section.

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Previously Presented) A data storage device characterized by providing a comparison section for reading out existing data stored in a storage element to compare said existing data and new data with each other prior to writing of said new data to said storage element, and

configuring so that, in said comparison section, in a case where said existing data and said new data are identical with each other, the writing to said storage element is not performed, and in a case where said existing data and said new data are not identical with each other, the writing of said new data to said storage element is performed;

characterized by providing a control signal generating section for generating a readout control signal for performing readout control of said existing data and a write control signal for performing write control of said new data, and by configuring so that said existing data and said new data are compared with each other in said comparison section in accordance with a control signal from said control signal generating section.

6. (Canceled)

7. (Previously Presented) The data storage device as described in Claim 5, characterized in that:

the comparison section is provided with a new data retention section for temporarily retaining the new data; an existing data retention section for temporarily retaining the existing data; and a write enable signal generating section for comparing the new data retained in the new data retention section and the existing data retained in the existing data retention section with each other to control an output of the write enable signal,

the new data is temporarily retained in the new data retention section while the existing data is temporarily retained in the existing data retention section in accordance with the readout control signal output from the control signal generating section, and

the new data retained in the new data retention section and the existing data retained in the existing data retention section are compared with each other in accordance with the write control signal output from the control signal generating section.

8. (Previously Presented) The data storage circuit according to claim 1, wherein said readout control signal and said write control signal are derived from a write signal input to said control signal generating section.

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (New) A data storage circuit comprising:

a comparison section for reading out existing data stored in a storage element to

compare said existing data and new data with each other prior to writing of said new data to said storage element, wherein:

when the comparison section determines that the existing data and the new

data are identical, the new data is not written to the storage element, and

when the comparison section determines that the existing data and the new

data are not identical, the new data is written to the storage element; and

a control signal generating section for generating a readout control signal for performing readout control of the existing data and a write control signal for performing write control of the new data, wherein the existing data and the new data are compared with each other in the comparison section in accordance with the write control signal from the control signal generating section.

15. (New) A method for writing data in a data storage circuit, comprising:
reading out existing data stored in a storage element prior to writing new data to the storage element to compare the existing data and the new data to each other;
writing the new data to the storage element when the existing data and said new data are identical with each other, and so as to perform the write process of said new data to said storage element in a case where said existing data and said new data are not identical with each other; and
generating a readout control signal and a write control signal in accordance with a write signal input to the data storage circuit;
reading out the existing data in accordance with the readout control signal; and
comparing the existing data with the new data in accordance with the write control signal.

16. (New) A data storage device comprising:

a comparison section for reading out existing data stored in a storage element and compare the existing data and new data to each other prior to writing the new data to the storage element, wherein

when the comparison section determines that the existing data and new data are identical, the new data is not written to the storage element, and

when the comparison section determines that the existing data and new data are not identical, the new data is written to the storage element;

a control signal generating section for generating a readout control signal for performing readout control of the existing data and a write control signal for performing write control of the new data, wherein the existing data and the new data are compared to each other in the comparison section, in accordance with a control signal from said control signal generating section.

17. (New) The data storage device as described in claim 16, wherein the comparison section comprises:

a new data retention section for temporarily retaining the new data;

an existing data retention section for temporarily retaining the existing data; and

a write enable signal generating section for comparing the new data retained in the new data retention section and the existing data retained in the existing data retention section with each other to control an output of the write enable signal, wherein,

the new data is temporarily retained in the new data retention section while the existing data is temporarily retained in the existing data retention section in response to the readout control signal output from the control signal generating section, and

the new data retained in the new data retention section and the existing data retained in the existing data retention section are compared to each other in response to the write control signal output from the control signal generating section.

18. (New) The data storage circuit according to claim 14, wherein the readout control signal and said write control signal are produced from a write signal input to said control signal generating section.

19. (New) The data storage circuit according to claim 14, wherein said control signal generating section comprises:

an AND logic gate for generating said readout control signal; and

a NOR logic gate for generating said write control signal;

wherein the pulse of the readout control signal and write control signal are shorter than the pulse of the write signal input.

20. (New) The data storage device according to claim 17, wherein said new data retention section and existing data retention section include input control transistors for controlling the retaining of the new data and the existing data in accordance with readout control signal.

21. (New) The data storage device according to claim 17, wherein the write enable signal generation section includes output control transistors for controlling comparison of the new data and the existing data in accordance with the write control signal.

22. (New) The data storage device according to claim 17, wherein the write enable signal generation section includes an XOR logic gate for generating a write enable signal in accordance with the new data and the existing data.